

REMARKS

Claim 1 has been amended by incorporating the subject matter of claims 2 and 3, which have been cancelled, without prejudice. This amendment simplifies the issues should appeal be necessary and does not introduce any new matter.

Restriction Requirement

Applicants again confirm the election of the process claims, with traverse. Applicants will consider canceling claims 11-16 upon an indication that the remaining claims are in condition for allowance. In the meantime, claims 11-16 have been identified as “withdrawn” from consideration by the Examiner.

Rejection Under 35 USC §103(a)

Claims 1-5, 7-9 and 17-19 have been rejected under 35 USC §103 as being unpatentable over "Glacino," U.S. Patent No. 3,519,437 (hereinafter, Giacino '437); and Poiger et al., U.S. Patent No. 4,194,017 (hereinafter, Poiger '017); Heyland et al., U.S. Patent No. 4,879,130 (hereinafter, Heyland '130) and Ter Braak, U.S. Patent No. 5,962,061 (hereinafter, Ter Braak '061). The rejection mentions, in summary, that Giacino '437 discloses a process for preparing a flavoring mix comprising heating reactants with water. The Examiner further mentions that Poiger '017 discloses a process for preparing a flavored base comprising heating reactants with water for 0.5 to 5 minutes to a temperature in the range from 100 to 200°C. The Examiner relies on Heyland '130 for disclosing a process for preparing a flavoring agent by heating reactant with water for 30 seconds to 30 minutes at a temperature of 80°C to 140°C. Finally, the Examiner relies on Ter Braak '061 as disclosing a process for preparing a flavoring mix comprising heating reactants with water. The Examiner believes that the water content reduction would be inherent and/or obvious. Finally, the Examiner believes that the use of a vending machine is nothing more than a selection of choice. In view of this, the Examiner believes that the obviousness rejection is warranted.

Notwithstanding the Examiner's apparent position to the contrary, it is the Applicants' position, again, that the presently claimed invention is patentably distinguishable from the above-described for at least the following reasons.

The present invention, as set forth in independent claim 1 as amended, is directed to a process for preparing a flavoring mix whereby the process comprises heating from about 10 mg to about 10 g of a composition comprising a carbohydrate source and a nucleophilic species and at least 20% by weight water to a temperature of 100°C to

250°C and reducing the water content of the composition during heating to less than 5% by weight within one (1) minute after the heating has started;
where the nucleophilic species can comprise biogenic amines, amino acids, sources of amino acids, hydrolyzed vegetable protein, yeast extracts, yeast hydrolysates, soy sauces or mixtures thereof;
where the carbohydrate source includes sugar; and
whereby the process is carried out in a food vending machine.

The process of claim 1 is further defined by the dependent claims which claim, among other things, that the composition can comprise sugar and an amino acid or a source of sugar and a source of amino acid, and that the composition may be a homogeneous solution, and that the water content of the composition may be reduced to less than 5% by weight within 20 seconds after heating has started, and that the temperature range of the heating step can be from 100°C to 200°C, and that a buffer solution may be employed. Claims 17-19 further define claim 1 by identifying the fast Maillard flavors produced and the time such flavors are produced, and by characterizing the process as one which generates sulphur-containing reaction products.

In contrast, and as already made of record, Giacino '437 is merely directed to meat flavor compositions - edible food compositions having two amino ethane sulphonic acid and thiamine are heated. Examples X and XI are directed to bouillon cubes and chicken flavored gravy, respectively, disclosing that a bouillon cube can be made and "transformed" into a gravy by boiling and simmering with water for two minutes. Giacino '437 is deficient in, among other things, failing to disclose the elements of water reduction within one minute. As stated on page 3 of the Specification, processing conditions such as the duration of the reaction (t) and water activity and their change

during the reaction time have a considerable influence on the resulting Maillard flavor and its character.

Poiger '017 are directed to a process for the production of a flavoring product reminiscent of meat in taste. The process comprises diluting a yeast autolysate with at least the same quantity by weight of water. Subsequent to adding water, insoluble salts are precipitated by heating the diluted autolysate at a pH value in the range from about 7 to 8.5 wherein a residual solution is treated to have a dry matter content of 75 to 85%. Reaction product is prepared in a double-jacketed stirrer-equipped boiler (see Examples). Poiger '017 fail to remedy the deficiencies of Giacino '437 as they also fail to disclose the elements of water reduction to less than 5 % wt. within one minute.

Heyland '130 are directed to a flavoring agent that is produced by subjecting a mixture of free amino acids, sugar and water to kneading and heat to produce a mixture that is plasticized. The resulting plasticized mixture is propelled through an extrusion unit under pressure and heated for a time to react the mixture. Heyland '130 fail to remedy the deficiencies of Poiger '017 and of Giacino '437 as they also, among other reasons, fail to disclose the elements of water reduction from at least 20 % wt. to less than 5 % wt. within one minute.

Ter Braak '061 is merely directed to a process and apparatus for the production of confectionery mass. Components of milk proteins, sugar, glucose, fat and water are homogenized under controlled pressure and temperature and transferred to a scrap surface rotor cooker to produce the desired mass. Ter Braak '061 fails to remedy the deficiencies of Heyland '130 and of Poiger '017 and of Giacino '437 as it also, among other reasons, fails to disclose the elements of water reduction from at least 20 % wt. to less than 5 % wt. within one minute.

With reference to the Office Action assertion relating to the critical water reduction element, inherency may not be established by probabilities or possibilities. Continental Can Company, U.S.A. v. Monsanto Company, 20 U.S.P.Q.2d 1746 (Fed. Cir. 1991). Since the cited references fail to disclose either explicitly or inherently that water is reduced from at least 20 % wt. to less than 5% wt. within one minute, a person skilled in the art would not find that water reduction from at least 20 % wt. to less than 5 % wt. within one minute is inherently disclosed.

None of the references relied on by the Examiner, taken alone (or in any viable combination), even remotely teach, suggest or disclose the important and critical limitations set forth in the presently claimed invention, as amended. None of the references relied on by the Examiner describe heating a carbohydrate source and nucleophilic species and at least 20% by weight of water to a temperature of 100°C to 250°C followed by reducing the water content of the composition during heating to less than 5 wt. % within one (1) minute after the heating has started. Moreover, none of the references, in any viable combination, suggest that the process may take place in a food vending machine¹ and that Maillard products may be produced within the same and on demand. Since all the important and critical limitations set forth in the presently claimed invention, as amended, are not found in a single prior art source or in the combination of references mentioned by the Examiner, the rejection made under 35 USC §103 is improper and must be withdrawn. A *prima facie* case of obviousness has not been set forth in the Office Action.

¹ Note, in the Advisory Action of March 15, 2005, in response to the amendment of claim 1 to recite the element "wherein the process is carried out in a food vending machine," the claim amendment was not entered as raising new issues that would require further consideration and search. However, subsequent prosecution has not revealed any additional search result other than the Examiner's alleged knowledge of vending machines.

Even if the Office Action were to be considered as finding all the elements in the numerous reference and Examiner's knowledge of vending machines (which Applicants suggest it does not), the Court of Appeal for the Federal Circuit has repeatedly held that when making out a *prima facie* case of obviousness, the focus must be on the invention as a whole,

That features, even distinguishing features are "disclosed" in the prior art is alone insufficient. As above indicated, it is common to find elements or features somewhere in the prior art. Moreover, most if not all elements perform their ordained and expected function. The test is whether the claimed invention as a whole, in light of all the teachings of the references in their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made. 35 U.S.C. 103.

Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1549, 220 U.S.P.Q. 193, 199 (Fed. Cir. 1983).

Again, while vending machines and Maillard reactions are known in general, the combination of references does not arrive at the present invention viewed as a whole because they fail to recognize or address the problem of cooking a product according to the specified steps directly in a vending machine.

Applicants respectfully submit that it is not well-known in the art to prepare foods within a vending machine, as presently claimed. In other words, while vending machines vend ready made products, or carry out a simply physical operation such as dissolving (e.g. coffee machines), it is not at all well known that a chemical reaction is carried out in a vending machine. A chemical reaction, especially the unique flavor reaction as presently claimed, is something entirely different from blending two components or dissolving.

Futhermore, an advantage of the process of the present invention is to provide vending machines which sell premium products. By carrying out a Maillard reaction in a vending machine, one achieves such premium products in two ways. First, each customer can tailor the desired flavor/aroma of the product bought. Second, as the flavor/aroma is generated *in situ*, a product is offered to the individual consumer which has a much fresher appeal, and thus a higher quality appeal of a premium product. With this goal, the solution is not obvious without hindsight. The cited art does not disclose a process suitable for use in a vending machine. Accordingly, the presently claimed invention is not obvious.

Applicants respectfully submit that all claims of record are now in condition for allowance. Reconsideration and favorable action are earnestly solicited.

If a telephone conversation would be of assistance, Applicants' undersigned attorney invites the Examiner to telephone at the number provided.

Respectfully submitted,



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